UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
LAVIN, CHRISTOPHER L

ART UNIT	PAPER NUMBER
2621	

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
	09/903,122	OVERTON ET AL.
Office Action Summary	Examiner	Art Unit	
	Christopher L. Lavin	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 November 2005*.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11 and 13-33* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *16* is/are allowed.

6)☐ Claim(s) *1-5,7-9,13-23,25 and 28-33* is/are rejected.

7)☒ Claim(s) *6,10,24,26 and 27* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 July 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claims 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by

Azegami (4,693,378).

In regards to claims 8 and 9, Azegami discloses analyzing an image field (step 1,

col. 8, lines 35 – 37). In col. 9, lines 30 – 40 Azegami discloses incrementing a counter

when an area is successfully discovered. In step 3 (col. 8, lines 40 – 43) a foreground

parameter is computed, in step 4 (col. 8, lines 43 – 45) that foreground parameter is

used to measure zoom (size). Azegami teaches (col. 8, lines 33 – 57) that the size of an

area of interest is calculated by counting the number of pixels in the area of interest.

The size is further classified by finding the percentage of the area of interest to the rest

of the image. This is a ratio of the target area pixel count to the rest of the image pixel

count.

Claim Rejections - 35 USC § 103

3.   The text of those sections of Title 35, U.S. Code not included in this action can

be found in a prior Office action.

4.   Claims 1 – 3, 7, 11 –15, 17 – 22, and 31 – 33 are rejected under 35 U.S.C.

103(a) as being unpatentable over the combination of Sharir (6,297,853) and

Gloudemans (6,266,100).

In regards to claim 1, Gloudemans discloses (col. 7, lines 30 – 53, col. 8, lines 43

– 65) a three dimensional model of a stadium which is used to place virtual objects into

a video stream. The examiner would also like to note that Gloudemans teaches (col. 4,

lines 53 – 58) placing a virtual object on a virtual surface. However, Gloudemans does

not teach determining the amount of time a target area is viewable.

Sharir in the paragraph starting at column 8, line 51 discloses a method for

tracking the duration an advertisement is seen in a video stream. Sharir in the

paragraph starting at column 12, line 34-36 discloses summing the time a target area is

seen. Inherent in a summation of time is a counter, as the system Sharir disclosed is

real-time (paragraph starting at column 7 line 7) it must increment the counter

automatically. Sharir also discloses in the paragraph starting at column 11 line 33 that a

field is analyzed for inclusion in one or more target areas. Sharir later teaches that an

occlusion parameter is measured (column 12, line 32) which can be used to control the

counter.

Therefore it would have been obvious to one having ordinary skill in the art at the

time of the invention to combine the ad inclusion counter and scheduling system as

taught by Sharir into the three-dimensional model used to insert content into a video

stream disclosed by Gloudemans. As Sharir teaches (col. 8, line 51 – 54) keeping track

of the duration an advertisement is shown will allow for more accurate charging of

customers. It will also allow the customer to be reassured that his or her ad was seen for the agreed upon duration.

In regards to claim 2, Sharir in the sentence starting at column 12, line 32 discloses calculating an occlusion parameter of the target area.

In regards to claim 3, Sharir in the sentence starting at column 12, line 27 discloses that a fee may be calculated based on the duration an ad has been seen.

In regards to claim 7, Sharir, as shown in the response to claim 2, discloses that an occlusion parameter is calculated. An occlusion parameter describes how much of the foreground, in this case an ad, is seen. Thus the occlusion parameter is a foreground parameter and meets the requirements of claim 7.

In regards to claim 11, Sharir at column 12, lines 27 - 32 discloses that an occlusion threshold of "at least 50%." If the occlusion parameter exceeds this threshold, then no fee is charged. This is equivalent to disallowing the increment as called for in claim 11.

In regards to claim 13, Sharir in the paragraph starting at column17 line 42 discloses that the ads shown in a particular target area may vary overtime as may a particular ad's location.

In regards to claim 14, Sharir in the paragraph starting at column 7 line 7 discloses that the system is meant to work in real time.

In regards to claim 15, Sharir in the paragraph starting at column 8 line 51 discloses collecting statistics on the advertisements shown. In the paragraph starting at column17 line 42, Sharir discloses a schedule for displaying the ads.

In regards to claim 17, Sharir, as previously shown in response to claims 10 and 13, discloses a method of tracking the duration an ad has been shown, which allows for the ad to be moved to different target areas. Inherent in such a design is the ability to track the total duration of an ad, regardless of how many different locations it is shown in.

In regards to claim 18, claim 18 is rejected for the same reasons as claim 1. The argument similar to that presented above for claim 1 is applicable to claim 18. Claim 18 distinguishes from claim 1 only in that it recites using "information on where the camera is positioned and is pointing" which Gloudemans teaches in (col. 7, lines 30 – 53).

In regards to claim 19, Gloudemans discloses (col. 7, lines 25 – 65) an image insertion system. In figure 2, items 60, 62, and 64 cameras are disclosed which make up the image capture system.

In regards to claim 20, As shown previously in claim 18 Sharir keeps track of the duration of each ad, therefore a duration module must be included in the system, that module must be contained somewhere within the image insertion system for it to be able to determine when an ad is inserted and keep track of it.

In regards to claim 21, Gloudemans as previously shown teaches a 3D model. The combination of Gloudemans and Sharir teaches an occlusion counter. Sharir in the figure 10B discloses the image separator and the occlusion separator modules set forth in claim 21. The Image separator consists of steps 290 through 340 in figure 10B. A target area is identified, segmented and in step 330 an advertisement is incorporated

into the target area. The occlusion separator module consists of steps 350 – 360. In step 350 the occlusion parameter is determined.

In regards to claim 22, Sharir in the sentence starting at column 12 line 32 discloses calculating an occlusion parameter of the target area.

In regards to claim 31, Sharir in the paragraph starting at column 8, line 51 discloses a module for tracking the duration an advertisement is seen in a video stream. Sharir in the paragraph starting at column 4 line 46 discloses a databank of ad locations for a particular venue. Such a databank acts as a model of the target areas of the site. Sharir in the paragraph starting at column 12, line 34-36 discloses summing the time a target area is seen. Inherent in a summation of time is a counter, as the system Sharir disclosed is real-time (paragraph starting at column 7 line 7) it must increment the counter automatically. Sharir also discloses in the paragraph starting at column 11 line 33 that a field is analyzed for inclusion in one or more target areas. Sharir in the sentence starting at column 12, line 32 discloses calculating an occlusion parameter of the target area. Sharir at column 12, lines 27 - 32 discloses that an occlusion threshold of "at least 50%." If the occlusion parameter exceeds this threshold, then no fee is charged. This is equivalent to determining the parameter based on the amount of time the target is within the image stream and the occlusion. However, Sharir does not disclose a three dimensional model of the venue nor camera's position used with the model.

Gloudemans teaches (col. 7, lines 25 – 53; col. 8, lines 43 – 65) that a three-dimensional model of a stadium should be used for ad placement. Gloudemans also

discloses that camera view information is used in connection with the model to determine target areas.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the ad insertion system of Sharir to use a three-dimensional model of the venue which takes into account camera view information. Gloudemans uses the three-dimensional model to accurately determine what a camera is pointed at, and then correctly insert an ad. Modifying Sharir to include this operation would simplify the image processing needed to determine a target area as well as make the process more accurate as the system would be able to determine precisely where a camera is pointed.

Due to the amendment to claim 18 the examiner became aware that the two references Gloudemans and Sharir could be reversed in the 103 rejection. Therefore a rejection using the combination of Gloudemans and Sharir in reverse order is also provided.

In regards to claim 31, claim 31 is rejected for the same reasons as claim 22. The argument similar to that presented above for claim 22 is applicable to claim 31. Claim 31 distinguishes from claim 22 only in that it recites "the physical site constitutes less than a complete model of all of the surfaces within the site" and "a module for determining the parameter based on the amount of time the target is within the image stream and the foreground occlusion of the target area". In regards to the first difference Gloudesmans teaches (col. 8, lines 43 – 65) that only portions of the stadium, which are of interest to insertion are modeled, thus a complete model is not created. In regards to

the second difference, Sharir at column 12, lines 27 - 32 discloses an occlusion threshold of "at least 50%." If the occlusion parameter exceeds this threshold, then no fee is charged. This is equivalent to determining the parameter based on the amount of time the target is within the image stream and the occlusion.

Therefore it would have been obvious to one skilled in the art at the time of the invention to modify the combination of Gloudemans and Sharir as taught in the rejection of claim 22 to include a fee calculation system that only charges when an advertisement is not occluded beyond a reasonable amount as taught by Sharir. Thus an advertiser will not feel cheated if his or her ad was occluded for the majority of the time it was "displayed".

In regards to claims 32 and 33, Gloudemans teaches (col. 4, lines 53 – 58) teaches placing a logo on a virtual surface.

5.   Claims 4, 5, 23, 25, and 28 - 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Gloudemans and Sharir in view of Agnihotri (6,731,788).

In regards to claim 4, Sharir in the sentence starting at column 12 line 32 discloses an occlusion parameter using the occluded area and the target area. This teaching has everything in common with claim 4 except for explicitly stating that the areas would be calculated based on the pixel count of the two regions.

Agnihotri teaches in his prior art (column 10 lines 30 – 32) that pixel count can be used to represent the area of a particular structure.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to use pixel count (as taught by Agnihotri) to compute the occlusion parameter. As pixel count is readily available in the system described by Sharir using pixel count would be an easy and efficient way to compute the area of regions that are often nonstandard shapes.

In regards to claim 5, Sharir in the sentence starting at column 12 line 32 discloses that a ratio of the occluded area and the target area are used to find the occlusion parameter.

In regards to claim 23, please see the rejection of claim 5.

In regards to claim 25, Sharir, as shown in the response to claim 22, discloses that an occlusion parameter is calculated. The occlusion parameter is a foreground parameter, as explained earlier.

In regards to claim 28, please see the rejection of claim 11.

In regards to claim 29, please see the rejection of claim 12.

In regards to claim 30, please see the rejection of claim 17.

6.   Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharir in view of Azegami (4,693,378).

In regards to claims 8 and 9, Sharir in the paragraph starting at column 8, line 51 discloses a method for tracking the duration an advertisement is seen in a video stream. Sharir in the paragraph starting at column 12, line 34-36 discloses summing the time a target area is seen. Inherent in a summation of time is a counter, as the system Sharir disclosed is real-time (paragraph starting at column 7 line 7) it must increment the

counter automatically. Sharir also discloses in the paragraph starting at column 11 line 33 that a field is analyzed for inclusion in one or more target areas. Sharir discloses (col. 5, lines 12 – 31) that "message area or display region", i.e., foreground parameter, is identified. Using this region the proper prospective information is calculated to properly include the ad into the region. This prospective information would include zoom or magnification information. Sharir discloses (col. 4, line 57 – col. 5, line 31) that the size of an ad area is determined so the ad can be properly sized and scaled to fit the area. Sharir however does not disclose a foreground parameter which is based on pixel count of the target area and pixel count of the at least one field.

Azegami teaches (col. 8, lines 33 – 57) that the size of an area of interest is calculated by counting the number of pixels in the area of interest. The size is further classified by finding the percentage of the area of interest to the rest of the image. This is a ratio of the target area pixel count to the rest of the image pixel count.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to classify the size of an area (as taught by Azegami) in the method disclosed by Sharir. By classifying the size of an area, quickly (counting pixels is a very quick operation for a computer) the method disclosed by Sharir can decide if the area is too small to fit a legible ad into. No advertiser would want to pay to display an ad that viewers can't see, preventing this situation would satisfy advertisers.

Allowable Subject Matter

7.   Claim 16 allowed.

8.   Claims 6, 10, 24, 26, and 27 are objected to as being dependent upon a rejected

base claim, but would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims.

The art of record does not teach nor does it suggest the specific features called

for in the claims, particularly implementing a counter designated with keeping track of

on air time of a target area where incrementing of the counter is controlled by a function

of the occlusion or foreground parameter.

Response to Arguments

9.   Applicant's arguments filed 11/14/05 have been fully considered but they are not

persuasive.

10.   As a preliminary matter the applicant states that language calling for a 3-d model

was included in claim 8. This amendment was not made.

11.   Applicant's arguments are moot with regards to claims 1, 8, 9,18, 21, 22, and 30

do to the amendments made to these claims.

12.   In regards to the arguments over claim 31, first it is noted that this combination of

references can be applied either way to meet claim 31, which was done to facilitate

prosecution above. The applicant's primary point of contention that Sharir would not

benefit from camera information is incorrect.   Sharir has to perform several

mathematical estimations to arrive at the location of the target region. By using camera

information and a 3D model a second estimate, which may be more accurate can be

reached. Having two estimates will allow for more accurate and realistic positioning. The

applicant's second argument focuses on the "principle of operation". Providing a

second approach to check Sharir does not change a principle of operation of Sharir, it simply makes the system more robust.

Conclusion

13.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher L. Lavin whose telephone number is 571-272-7392. The examiner can normally be reached on M - F (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mancuso Joseph can be reached on (571) 272-7695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christopher Lavin

BRIAN WERNER
PRIMARY EXAMINER